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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/834,504	04/13/2001	Masato Shimakawa	450100-03160	5787
20999	7590	10/07/2004	EXAMINER	
FROMMER LAWRENCE & HAUG 745 FIFTH AVENUE- 10TH FL. NEW YORK, NY 10151			WOZNIAK, JAMES S	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/834,504	Applicant(s) SHIMAKAWA, MASATO	
	Examiner James S. Wozniak	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. In response to the office action from 4/5/2004, the applicant has submitted an amendment, filed 8/3/2004, amending the title of the invention and claims 1-14, while adding claims 15-25 and arguing to traverse the art rejection based on the limitation regarding removing or temporarily storing previously stored command definition information when an electronic device is disconnected from a speech recognition network (*Amendment, Pages 13 and 15*). The applicant's arguments have been fully considered, however, as per the reasons below listed in the response to arguments, the below rejection is maintained, altered only with respect to the amended claims and without the addition of any new prior art.

2. Based on the amendment to the title of the invention, the examiner has withdrawn the previous title objection.

Response to Arguments

3. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

- With respect to independent **claims 1, 13, and 14**, the applicant argues that Everhart et al (*U.S. Patent: 6,240,347*) fails to teach the limitation regarding

removing or temporarily storing previously stored command definition information when an electronic device is disconnected from a speech recognition network, however, in the previous office action, this limitation from previous claim 9 was rejected over Everhart et al in view of Nguyen et al (U.S. Patent: 6,219,703). Although Nguyen does not explicitly teach removing previously stored command definition information when an electronic device is disconnected from a network, official notice was taken with respect to this limitation (*Non-final Action, Page 10*). Therefore, since the applicant has not challenged the official notice taken with respect to this limitation and because the claimed invention utilizes an “exclusive or” of either temporary storage or removal of recognition data based upon device connection status (no combination of the removal and temporary storage function is claimed), the examiner has repeated the official notice rejection below.

- **Claims 2-12** are argued as further limiting their parent claims (*Amendment, Pages 13-16*). Thus, since the rejection of claims 1, 13, and 14 is maintained, Claims 2-12 remain rejected.
- New **claims 15-25** contain subject matter that corresponds to claims 2-12 (*Amendment, Page 16*), and thus, are rejected for the same reasons.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 2, 5-10, 13-15, and 18-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Nguyen et al (*U.S. Patent: 6,219,703*).

With respect to **Claims 1 and 13**, Everhart discloses:

An information processing apparatus and method for controlling, in accordance with a plurality of speech commands input by a user, a plurality of electronic apparatuses on a network connected to said information processing apparatus, said information processing apparatus comprising:

Command definition information obtaining means for obtaining command definition information that defines a correspondence between the plurality of speech commands input by the user and a plurality of control commands for controlling said plurality of electronic apparatuses (*speech processor for recognizing an utterance and determining its associated command, Col. 1, Lines 51-54*);

Storage means for storing said command definition information obtained by said command definition information obtaining means (*voice application software within a speech processor to determine a command function from a speech input, Col. 3, Lines 11-17. Also, it*

would be inherent that the voice application command definitions would be contained in a storage means to provide system access to all valid speech commands and enable their updating);

Speech recognition means for recognizing a speech command input by the user (*speech processor, Col. 1, Lines 51-54*);

Determining means for determining a control command corresponding to the speech command as recognized by said speech recognition means, based on said command definition information stored in said storage means (*voice application software for determining a command related to a speech input, Col. 3, Lines 15-17*); and

Control means for controlling one of said plurality of electronic apparatuses using the control command determined by said determining means (*speech processor that recognizes commands and transmits the corresponding function to a controllable device, Col. 1, Lines 51-54*).

Everhart does not teach a means for connection status detection that is further utilized to add and delete command information accordingly, however Nguyen discloses:

When one or more new electronic apparatuses are connected to said network, new command definition information associated with one or more new electronic apparatuses is added to said storage means (*detecting the presence of a device on a network and obtaining device data upon detection, Col. 2, Lines 7-11*).

Everhart and Nguyen are analogous art because they are from a similar field of endeavor in device control over a network. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of detecting the presence of a device

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on a network and obtaining device management data upon detection as taught by Nguyen with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function as taught by Everhart to create a more adaptive command recognition system, capable of adding command data in the form of a speech vocabulary upon the addition of a new device to a network. Also, it would have been obvious to one of ordinary skill in the art, at the time of invention, to use the device detection capabilities as taught by Nguyen to detect the removal of a device, since if new data is added upon connection, it would be obvious to delete data upon device removal in order to conserve system memory and reduce recognition errors. Therefore, it would have been obvious to combine Nguyen with Everhart for the benefit of creating a more adaptive command recognition system through the detection of device connection status that determines the removal or addition of command data.

With respect to **Claims 2 and 15**, Everhart further recites:

An information processing apparatus, wherein said command definition information is associated with ID information of said plurality of electronic apparatuses *(specific voice commands identifying a particular device, upon which a control function will be performed, such as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33)*.

With respect to **Claims 5 and 18**, Everhart in view of Nguyen teaches the speech command recognition system and method capable of identifying a speech input as being associated with a particular device in order to perform a requested function, as applied to Claims 1 and 13. Everhart in view of Nguyen does not specifically suggest that command definition information is obtained from a server or storage medium; however, it would have been obvious

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to one of ordinary skill in the art, at the time of invention, to obtain command definition information from a server or computer readable medium since storage of speech command information on a server or storage medium is a means, well-known in the art, of providing access to speech command information at a central location, thus reducing needed memory at a local controllable device.

With respect to **Claims 6 and 19**, Everhart additionally discloses:

An information, further comprising ID information obtaining means for obtaining ID information of said plurality of electronic apparatuses, wherein said command definition information obtaining means obtains said command definition information based on the ID information of said plurality of electronic apparatuses obtained by said ID information obtaining means (*speech processor that recognizes commands, identifies the corresponding controllable device and function, and transmits the command to the appropriate device, Col. 1, Lines 51-54*).

With respect to **Claims 7 and 20**, Everhart further recites:

An information processing apparatus, wherein said ID information includes at least one of node ID, product ID, machine ID, and type ID (*specific voice commands identifying a particular device (type ID), upon which a control function will be performed, such as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33*).

With respect to **Claims 8 and 21**, Everhart in view of Nguyen teaches the speech command recognition system and method featuring device identification means as applied to Claims 6 and 19. Everhart in view of Nguyen does not specifically suggest command definition information obtained based on node, product, machine, or type ID, in that order of priority, however, it would have been obvious to one of ordinary skill in the art, at the time of invention,

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to obtain command data for the devices located in the command recognition system taught by Everhart in the specified order given above because it would allow for a logical progression of acquiring command functions. For example, a system would first look to a node, then a specific product ID unique to a machine to identify a command function. If, at that point, the command data could not be acquired, it would be necessary to further obtain a more general device classification such as manufacturer ID, and then the particular type ID of device made by that manufacturer in order to create a compatible command interface with a similar machine.

With respect to **Claims 9 and 22**, Nguyen further recites:

Connection status detecting means for detecting the connection status of said plurality of electronic apparatuses (*detecting the presence of a device on a network and obtaining device data upon detection, Col. 2, Lines 7-11*).

With respect to **Claims 10 and 23**, Everhart additionally discloses:

An information processing apparatus, further comprising selecting means for allowing the user to select one of said plurality of electronic apparatuses, wherein said determining means is allowed to determine the control command corresponding to the speech command as recognized by said speech recognition means, based on only part of said command definition information corresponding to the electronic apparatus selected by said selecting means (*key words identifying a particular device, upon which a control function will be performed, such as vehicle temperature setting or power window position adjustment, Col. 5, Lines 27-33, thus since a particular device is identified, further parameter adjustment through speech recognition will be directed only to the selected device, Col. 5, Lines 56-58*).

With respect to **Claim 14**, Everhart in view of Nguyen teaches the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status, as applied to Claim 13. Everhart does not specifically suggest command definition storage on a computer readable medium, however, it would have been obvious to one of ordinary skill in the art, at the time of invention, to store the speech commands taught by Everhart on a computer readable medium to increase command compatibility and usability by providing a means for command use with multiple computer systems.

6. **Claims 3,4, 16, and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Nguyen et al, and further in view of Vanbuskirk et al (*U.S. Patent: 6,308,157*).

With respect to **Claims 3 and 16**, Everhart in view of Nguyen teaches the speech command recognition system and method capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status, as applied to Claims 1 and 13. Everhart in view of Nguyen does not teach a means of defining acceptable commands based on device operation status, however Vanbuskirk discloses:

An information processing apparatus, wherein said command definition information defines, on the basis of operation status of said plurality of electronic apparatuses, acceptable speech commands, control commands corresponding to the speech commands, and transitions of operation status which occur on execution of each of the control commands (*monitoring a system*

state of operation and determining acceptable voice commands for a current state, Col. 2, Lines 29-35).

Everhart, Nguyen, and Vanbuskirk are analogous art because they are from a similar field of endeavor in control-related processing systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of determining a system state of operation so as to define acceptable speech commands for the current state as taught by Vanbuskirk with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status as taught by Everhart in view of Nguyen to create a less error-prone speech command interface by decreasing the quantity of acceptable speech commands (some of which may have no function at a particular operation state) through the determination of a device operation state and its associated commands, Vanbuskirk, Col. 2, Lines 39-44. Therefore, it would have been obvious to combine Vanbuskirk with Everhart in view of Nguyen for the benefit of obtaining a less complex speech command interface by determining a device operation state and associated commands.

With respect to **Claims 4 and 17**, Everhart in view of Nguyen teaches the speech command recognition system and method capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status, as applied to Claims 1 and 13. Everhart in view of Nguyen does not teach the ability to detect a state of device and its associated command function, however Vanbuskirk discloses:

An information processing apparatus, wherein said determining means comprises operation status detecting means for detecting the operation status of said plurality of electronic apparatuses, whereby said determining means determines, in accordance with the operation status of said plurality of electronic apparatuses detected by said operation status detecting means, the control command corresponding to the speech command as recognized by said speech recognition means, based on said command definition information (*monitoring a system state of operation and determining acceptable voice commands corresponding to a system function for a current state, Col. 2, Lines 29-35, and voice commands associated with a particular function for a current state, Fig. 5*).

Everhart, Nguyen, and Vanbuskirk are analogous art because they are from a similar field of endeavor in control-related processing systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of detecting a state of device operation and determining the appropriate voice commands and corresponding functions as taught by Vanbuskirk with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status as taught by Everhart in view of Nguyen to reduce command processing errors by identifying a device operation state and making available only those commands and functions that would be applicable since not all commands and functions would be appropriate during every command state. Therefore, it would have been obvious to combine Vanbuskirk with Everhart in view of Nguyen for the benefit of implementing less complex processing within a speech command

interface system by detecting a device state of operation and limiting available commands and functions to only those which are applicable for a particular state.

7. **Claims 11 and 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Nguyen et al, and further in view of Diehl et al (*U.S. Patent: 6,052,666*).

With respect to **Claims 11 and 24**, Everhart in view of Nguyen teaches the speech command recognition system and method capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status, as applied to Claims 1 and 13. Everhart in view of Nguyen does not teach a command history for operating the most recently used device if it is unclear as to which device a speech command relates, however Diehl discloses:

An information processing apparatus, further comprising control command history storage means for storing history information regarding the control command determined by said determining means, wherein an electronic apparatus in accordance with a user input or an electronic apparatus which is found to be most recently operated according to the history information stored in said control command history storage means is controlled using the control command, if it is not otherwise determined which of said plurality of electronic apparatuses be controlled using the control command (*generating a list of several devices that pertain to a single command and determining the target device through a statistical approach, Col. 3, Lines 41-46, and a change channel command received after a TV set has been turned on. Since, in this*

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case, the TV was the last device used, it would be more probable that the command would be related to the TV rather than a VCR, Col. 4, Lines 3-6).

Everhart, Nguyen, and Diehl are analogous art because they are from a similar field of endeavor in control-related processing systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the method of transmitting a command to a most probable device through a statistical approach when a command pertains to more than one device as taught by Diehl with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status as taught by Everhart in view of Nguyen to create a command recognition system in which command confusion is prevented by selecting a most probable device when a single command pertains to more than one device. Also, it would have been obvious to one of ordinary skill in the art, at the time of invention, that a most previously operated device would also be a most probable device for receiving a voice command (as in a case of commands for repeatedly changing channels on a television), thus implementing usage history in determining a most probable device to receive a command. Therefore, it would have been obvious to combine Diehl with Everhart in view of Nguyen for the benefit of eliminating device confusion in a speech command interface system by determining a most probable device for receiving a command based on usage history when a single command pertains to more than one device.

8. **Claims 12 and 25** are rejected under 35 U.S.C. 103(a) as being unpatentable over Everhart et al in view of Nguyen et al, and further in view of Peck et al (*U.S. Patent: 5,375,063*).

With respect to **Claims 12 and 25**, Everhart in view of Nguyen teaches the speech command recognition system and method capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status, as applied to Claims 1 and 13. Everhart in view of Nguyen does not teach the ability of the user to create a command vocabulary, however Peck discloses:

An information processing apparatus, further comprising command definition information generation means for generating command definition information as desired, wherein said command definition information obtaining means is allowed to obtain said command definition information from said command definition information generation means *(creation of a user command vocabulary and corresponding device control signals, Col. 10, Lines 5-20)*.

Everhart, Nguyen, and Peck are analogous art because they are from a similar field of endeavor in control-related processing systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to combine the ability of a user to create a command vocabulary relating to device control signals as taught by Peck with the speech command recognition system capable of identifying a speech input as being associated with a particular device in order to perform a requested function and removing and adding command information based on device connection status as taught by Everhart in view of Nguyen to create a speech controlled system that is easier to use since a user is not required to learn specific commands in order to operate a device and can create a user-specific command vocabulary.

Therefore, it would have been obvious to combine Peck with Everhart in view of Nguyen for the benefit of creating a user-configurable speech controlled system.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

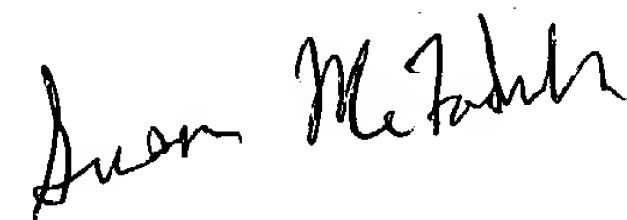
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (703) 305-8669 and email is James.Wozniak@uspto.gov. The examiner can normally be reached on Mondays-Fridays, 8:30-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached at (703) 305-4827. The fax/phone number for the Technology Center 2600 where this application is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology center receptionist whose telephone number is (703) 306-0377.

James S. Wozniak
9/7/2004



SUSAN MCFADDEN
PRIMARY EXAMINER